

CONSOLIDATED CHECKLIST  
for the  
Toxicity Characteristics Revisions as of June 30, 1996

Notes: 1) This checklist consolidates the changes to the Federal code addressed by the Toxicity Characteristic (TC) Rule [55 FR 11798; March 29, 1990; Revision Checklist 74] and subsequent revisions which have occurred through June 30, 1996, as follows:

- Revision Checklist 74 [55 FR 11798 (March 29, 1990), 55 FR 26986 (June 29, 1990)];
- Revision Checklist 80 [55 FR 40834 (October 5, 1990), 56 FR 3978 (February 1, 1991), 56 FR 13406 (April 2, 1991)];
- Revision Checklist 84 [56 FR 5910 (February 13, 1991)];
- Revision Checklist 108 [57 FR 30657 (July 10, 1992)];
- Revision Checklist 117 B [57 FR 23062 (June 1, 1992)]; and
- Revision Checklist 119 [57 FR 55114 (November 24, 1992)].

No final rules were promulgated between November 24, 1992, and June 30, 1996, that affected the Toxicity Characteristics Revision rule. Therefore, this consolidated checklist is identical to that of June 30, 1993.

Note that there have been several technical corrections to the TC Rule preamble. An August 2, 1990 (55 FR 31387) notice corrected a typographical error in an implementation timetable found in the TC Rule's preamble. This error created confusion among small quantity generators regarding their notification responsibilities for TC wastes. This rule also extended the period of time within which affected small quantity generators must comply with the new modification requirements. An August 10, 1990 (55 FR 32377) notice corrected the August 2, 1990 notice. On September 27, 1990, a clarification to the March 29 final rule was published in the Federal Register (55 FR 39409) regarding four implementation issues. This clarification also only affected the TC Rule preamble.

No final rules were promulgated between June 30, 1993 and June 30, 1996 that affected the TC rule. Note, Revision Checklist 126 (56 FR 46040; August 31, 1993), however, replaced all references to the TCLP in Part 261, Appendix II with a reference to the TCLP in SW-846. This rule also replaced the TCLP in Part 261, Appendix II with a note referencing this publication that is incorporated by reference at 260.11(a). This rule is not indicated in the checklist reference column of this consolidated checklist, but it is referenced in the footnote. This approach was taken because this rule is not a correction to the TC rule per se; but rather it introduced a new method of referencing the TCLP.

2) Two interim final rules (55 FR 40834; October 5, 1990 and 56 FR 3978; February 1, 1991) and a final rule (56 FR 13406; April 2, 1991) extended the compliance date of the Toxicity Characteristic (TC) Rule for certain hydrocarbon recovery and remediation operations. This extension is addressed by Revision Checklist 80 and included in this Consolidated Checklist. Because a less stringent requirement than that imposed by the TC Rule was in effect until January 25, 1993, the incorporation by States of this extension is optional.

3) States are strongly encouraged to adopt the Permit Modifications Rule (53 FR 37912; September 28, 1988; Revision Checklist 54) and the "Christmas Tree Rule" (54 FR 9596; March 7, 1989; Revision Checklist 61) to ease implementation of the Toxicity Characteristic Rule and future waste listings. While both of these rules are optional, they will greatly reduce the immediate permit burden resulting from the TC Rule.

**CONSOLIDATED CHECKLIST : Consolidated Checklist for the  
Toxicity Characteristics Revisions as of June 30, 1996 (cont'd)**

FEDERAL REQUIREMENTS	CHECKLIST REFERENCE	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	STATE ANALOG IS:			
				EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADER IN SCOPE
PART 261 - IDENTIFICATION AND LISTING OF HAZARDOUS WASTE							
SUBPART A - GENERAL							
DEFINITION OF HAZARDOUS WASTE							
change "Extraction Procedure Toxicity characteristic" to "Toxicity Characteristic"	117 B	261.3(a)(2)(i)					
EXCLUSIONS							
replace "characteristic of EP toxicity" with "Toxicity Characteristic"	74	261.4(b)(6)(i)					
replace "characteristic of EP toxicity, and do not fail the test for" with "toxicity characteristic for any other constituent, and do not exhibit"	108	261.4(b)(6)(ii)					
insert "arsenical-treated" after "discarded"; replace "characteristic of EP toxicity" with "Toxicity Characteristic for Hazardous Waste Codes D004 through D017"; delete "or reasons," after "reason"	74,108	261.4(b)(9)					
add new paragraph regarding petroleum- contaminated media and debris that fail the 261.24 Toxicity Characteristic test (D018 through D043 only) and are subject to Part 280 corrective action	74	261.4(b)(10)					

CONSOLIDATED CHECKLIST : Consolidated Checklist for the  
Toxicity Characteristics Revisions as of June 30, 1996 (cont'd)

FEDERAL REQUIREMENTS	CHECKLIST REFERENCE	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	STATE ANALOG IS:			
				EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADER IN SCOPE
Extension for Specified Hydrocarbon Recovery Operations							
add new paragraph; until January 25, 1993, exclusion for injected groundwater exhibiting the 261.24 Toxicity Characteristic that is infiltrated or reinjected pursuant to specified hydrocarbon recovery operations existing on or before March 25, 1991; extension only until six months after final rule publication for groundwater returned through infiltration galleries; conditions for new operations involving injection to qualify for date extension	80	261.4(b)(11)					
operations are performed pursuant to a written state agreement that includes a provision to assess the groundwater and the need for further remediation once the free phase recovery is completed	80	261.4(b)(11)(i)					
copy of written agreement has been submitted to the Characteristics Section, U.S. Environmental Protection Agency	80	261.4(b)(11)(ii)					

CONSOLIDATED CHECKLIST : Consolidated Checklist for the  
Toxicity Characteristics Revisions as of June 30, 1996 (cont'd)

FEDERAL REQUIREMENTS	CHECKLIST REFERENCE	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	STATE ANALOG IS:			
				EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADER IN SCOPE
†,4 add new paragraph; used chlorofluorocarbon refrigerants from totally enclosed heat transfer equipment, provided the refrigerant is reclaimed for further use	84	261.4(b)(12)					

PCB WASTES REGULATED UNDER TOXIC SUBSTANCE CONTROL ACT

exemption for PCB-containing wastes, already regulated under Part 761 (TSCA), that fail the 261.24 Toxicity Characteristic test (D018 through D043 only)	74	261.8					
--	----	-------	--	--	--	--	--

SUBPART C - CHARACTERISTICS OF HAZARDOUS WASTE

TOXICITY CHARACTERISTIC

5 remove "EP" before "toxicity"; insert "using the methodology outlined in Appendix II" after "after filtering"; change "purposes" to "purpose"	74	261.24(a)					
1 remove "EP" before "toxicity"; add D018 through D043 to Table 1; as per technical correction, change the word "hydroxide" in the contaminant for D031 to "epoxide"; add new column with CAS numbers	74	261.24(b)					

**CONSOLIDATED CHECKLIST : Consolidated Checklist for the  
Toxicity Characteristics Revisions as of June 30, 1996 (cont'd)**

FEDERAL REQUIREMENTS	CHECKLIST REFERENCE	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	STATE ANALOG IS:			
				EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADER IN SCOPE

**TABLE 1. - MAXIMUM CONCENTRATION OF CONTAMINANTS FOR THE  
TOXICITY CHARACTERISTIC**

EPA HW No. <sup>1</sup>	Contaminant	CAS No. <sup>2</sup>	Regulatory Level (mg/L)
D004	Arsenic .....	7440-38-2	5.0
D005	Barium .....	7440-39-3	100.0
D018	Benzene .....	71-43-2	0.5
D006	Cadmium .....	7440-43-9	1.0
D019	Carbon tetrachloride .....	56-23-5	0.5
D020	Chlordane .....	57-74-9	0.03
D021	Chlorobenzene .....	108-90-7	100.0
D022	Chloroform .....	67-66-3	6.0
D007	Chromium .....	7440-47-3	5.0
D023	o-Cresol .....	95-48-7	<sup>4</sup> 200.0
D024	m-Cresol .....	108-39-4	<sup>4</sup> 200.0
D025	p-Cresol .....	106-44-5	<sup>4</sup> 200.0
D026	Cresol .....	--	<sup>4</sup> 200.0
D016	2,4-D .....	94-75-7	10.0
D027	1,4-Dichlorobenzene .....	106-46-7	7.5
D028	1,2-Dichloroethane .....	107-06-2	0.5
D029	1,1-Dichloroethylene .....	75-35-4	0.7
D030	2,4-Dinitrotoluene .....	121-14-2	<sup>3</sup> 0.13
D012	Endrin .....	72-20-8	0.02
D031	Heptachlor (and its epoxide) ....	76-44-8	0.008
D032	Hexachlorobenzene .....	118-74-1	<sup>3</sup> 0.13
D033	Hexachlorobutadiene .....	87-68-3	0.5
D034	Hexachloroethane .....	67-72-1	3.0
D008	Lead .....	7439-92-1	5.0
D013	Lindane .....	58-89-9	0.4
D009	Mercury .....	7439-97-6	0.2
D014	Methoxychlor .....	72-43-5	10.0
D035	Methyl ethyl ketone .....	78-93-3	200.0
D036	Nitrobenzene .....	98-95-3	2.0
D037	Pentachlorophenol .....	87-86-5	100.0
D038	Pyridine .....	110-86-1	<sup>3</sup> 5.0
D010	Selenium .....	7782-49-2	1.0
D011	Silver .....	7440-22-4	5.0
D039	Tetrachloroethylene .....	127-18-4	0.7
D015	Toxaphene .....	8001-35-2	0.5
D040	Trichloroethylene .....	79-01-6	0.5
D041	2,4,5-Trichlorophenol .....	95-95-4	400.0
D042	2,4,6-Trichlorophenol .....	88-06-2	2.0
D017	2,4,5-TP (Silvex) .....	93-72-1	1.0
D043	Vinyl chloride .....	75-01-4	0.2

<sup>1</sup> Hazardous waste number.

<sup>2</sup> Chemical abstracts service number.

<sup>3</sup> Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.

<sup>4</sup> If o-, m-, and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/l.

**SUBPART D - LISTS OF HAZARDOUS WASTES**

CONSOLIDATED CHECKLIST : Consolidated Checklist for the  
Toxicity Characteristics Revisions as of June 30, 1996 (cont'd)

FEDERAL REQUIREMENTS	CHECKLIST REFERENCE	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	STATE ANALOG IS:			
				EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADER IN SCOPE
GENERAL							
replace "EP Toxic Waste" in the hazard codes and in the text following the hazard codes with "Toxicity Characteristic Waste"	74	261.30(b)					
APPENDIX II TO PART 261							
METHOD 1311 TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP)							
EP toxicity test procedures are replaced by Method 1311 Toxicity Characteristic Leaching Procedures (TCLP)	74	Appendix II					
Withdrawal of Spike Recovery Correction Requirement From Method 1311 TCLP							
change "data is" to "data are"; delete sentence regarding bias determined from matrix spike determination and parenthetical reference phrase following it	119	Appendix II, 8.2					
change "may not be not less" to "may not be less"	119	Appendix II, 8.2.2					
remove subparagraph	119	Appendix II, 8.2.5					
redesignate former 8.4 as 8.5; add new 8.4 and subparagraphs addressing use of internal calibration quantitation methods	119	Appendix II, 8.4					
		Appendix II, 8.4.1					
		Appendix II, 8.4.2					
		Appendix II, 8.4.3					
		Appendix II, 8.4.4					
former 8.4 becomes 8.5	119	Appendix II, 8.5					

**CONSOLIDATED CHECKLIST : Consolidated Checklist for the  
Toxicity Characteristics Revisions as of June 30, 1996 (cont'd)**

FEDERAL REQUIREMENTS	CHECKLIST REFERENCE	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	STATE ANALOG IS:			
				EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADER IN SCOPE

**PART 264 - STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS  
WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES**

**SUBPART N - LANDFILLS**

**DESIGN AND OPERATING REQUIREMENTS**

replace "EP toxicity characteristics" with "Toxicity Characteristic"; insert "with EPA Hazardous Waste Numbers D004 through D017" after "chapter"	74	264.301(e)(1)					
---	----	---------------	--	--	--	--	--

**PART 265 - INTERIM STATUS STANDARDS FOR OWNERS AND OPERATORS OF  
HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES**

**SUBPART K - SURFACE IMPOUNDMENTS**

**DESIGN REQUIREMENTS**

replace "EP toxicity characteristics" with "Toxicity Characteristic"; insert "with EPA Hazardous Waste Numbers D004 through D017" after "chapter"	74	265.221(d)(1)					
---	----	---------------	--	--	--	--	--

**SUBPART M - LAND TREATMENT**

**WASTE ANALYSIS**

replace "exceed" with "equal or exceed"; replace "EP toxicity characteristic" with "Toxicity Characteristic"	74	265.273(a)					
--	----	------------	--	--	--	--	--

**SUBPART N - LANDFILLS**

**DESIGN REQUIREMENTS**

CONSOLIDATED CHECKLIST : Consolidated Checklist for the  
Toxicity Characteristics Revisions as of June 30, 1996 (cont'd)

FEDERAL REQUIREMENTS	CHECKLIST REFERENCE	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	STATE ANALOG IS:			
				EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADER IN SCOPE
10 replace "EP toxicity characteristics" with "Toxicity Characteristic"; insert ", with EPA Hazardous Waste Numbers D004 through D017" after "chapter"	108	265.301(d)(1)					

PART 268 - LAND DISPOSAL RESTRICTIONS

APPENDIX I TO PART 268

TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP)

5, 11 replace Appendix with note stating the TCLP is located in Appendix II of Part 261	74	Appendix I					
---	----	------------	--	--	--	--	--

- <sup>1</sup> Also see technical corrections to the rule at 55 FR 26986 (June 29, 1990).
- <sup>2</sup> See the immediate final rules at 55 FR 40834 (October 5, 1990) and 56 FR 3978 (February 1, 1991) and the final rule at 56 FR 13406 (April 2, 1991).
- <sup>3</sup> A copy of the agreement should be sent to EPA's Characteristics Section; thus, this reference should remain in a State's code. A copy of the written agreement may also be sent to the State, if the State chooses to include this requirement.
- <sup>4</sup> The final rule (56 FR 5910, February 13, 1991) which introduced this paragraph into the Federal code is considered "narrower in scope" because it narrows the wastes which are regulated, by excluding from regulation certain chlorofluorocarbon refrigerants as specified at 261.4(b)(12).
- <sup>5</sup> Revision Checklist 74 added the TCLP at Part 261, Appendix II. Note, however, that Revision Checklist 126 (58 FR 46040; August 31, 1993), a non-TC checklist, replaced the TCLP (method 1311) in Appendix II to Part 261 with a note referencing the TCLP "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" as incorporated by reference at 260.11(a). All references to Part 261, Appendix II and Part 268, Appendix IX were revised to reflect these changes. Revision Checklist 126 did not revise the content nor the intended use of the TCLP or the EP toxicity methods.
- <sup>6</sup> Because the June 29, 1990 (55 FR 26986) notice made extensive corrections to Appendix II, Part 261, the Appendix in that notice should be used instead of the one in the March 29, 1990 (55 FR 11798) notice.

CONSOLIDATED CHECKLIST : Consolidated Checklist for the  
Toxicity Characteristics Revisions as of June 30, 1996 (cont'd)

- 7 On June 29, 1990 (55 FR 26986; Revision Checklist 74), EPA promulgated a final rule which made technical corrections to the March 29, 1990 final rule, including the regulatory language in 40 CFR Part 261, Appendix II. Those corrections reorganized the TCLP in 40 CFR Part 261, Appendix II and included adding a requirement for the spike recovery correction. The November 24, 1992 rule (57 FR 55114; Revision Checklist 119) deleted the requirements for spike recovery correction of analytical data. Because such deletions provide for a standard less restrictive than was imposed on June 29, 1990, States are not required to include spike recovery correction when modifying their programs to incorporate the final TCLP.
- 8 There is a typographical error in the Federal Register; "84.4.4" should be "8.4.4."
- 9 There is a typographical error in the Federal Register; in the table at 8.5, second column heading, there should be a space between "TCLP" and "extraction."
- 10 There are several errors in the Federal Register for this citation. First, "such waste does not" should read "such wastes do not" and "261.4 of this chapter" should read "261.24 of this chapter" as they are found in the July 15, 1985, Federal Register at 50 FR 28750 (Revision Checklist 17(H)). Second, "Waste Number" should be "Waste Numbers." These errors have been reflected in the CFR since July 1, 1993.
- 11 As background, the TCLP was originally promulgated in 268, Appendix I, on November 7, 1986 (51 FR 40572; Revision Checklist 34) for use in the Land Disposal Restrictions (LDR) program to determine whether certain wastes require treatment prior to land disposal and to determine whether certain treated wastes meet the applicable treatment standards. The TC rule and its June 29, 1990 modification promulgated a revised TCLP at 261, Appendix II, with modifications based on the Agency's own research and public comment. This TCLP is to be used in both the TC and the LDR programs. The objective of the above footnoted revision to 268, Appendix I, is to assure that the TCLP entered into the code by the November 7, 1986 notice (51 FR 40572; Revision Checklist 34) is removed and replaced by the TCLP entered into the code and amended by the final rules (55 FR 11798 and 55 FR 26986) addressed by Revision Checklist 74. The actual placement of the TCLP within a State's code is not that important, per se; what is important is that a State's code contains only the Revision Checklist 74 TCLP. States that have not yet adopted Revision Checklist 34 (the first of the LDR restrictions) need not make this particular revision to 268, Appendix I, as they would not yet have entered the original Part 268 TCLP into their code. Also, the change on page 6 of this checklist for 261, Appendix II, assures that they add the Revision Checklist 74 TCLP to their code. However, such States must be careful when adding the LDR restrictions to their code, i.e., the Revision Checklist 34 TCLP should not be added at that time--rather, the Revision Checklist 74 TCLP should remain the only TCLP in their code. States using the Consolidated LDR Checklist should be sure to read the relevant footnote on that checklist regarding this issue.